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# 中国苔草属菱形果组新资料(2)*

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# NEW MATERIAL OF *CAREX* SECTION RHOMBOIDALES FROM CHINA(2)

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**Key words** *Carex* section Rhomboidales; *C. kaoi*; *C. nanchuanensis*; *C. cheniana*; *C. funingensis*; *C. pseudo-laticeps*; *C. kuchunensis*; *C. longerostrata* var. *hoi*; *C. simulans* var. *densiflora*; *C. manca* subsp. *jiuhuaensis*; *C. manca* subsp. *wichurai*

**关键词** 苔草属菱形果组；高氏苔草；南川苔草；陈氏苔草；富宁苔草；弥勒山苔草；古城苔草；城湾苔草(变种)；密花相仿苔草(变种)；九华山苔草(亚种)；澳门苔草(亚种)

## 1 高氏苔草 新种 图1:1～5

**Carex kaoi** Tang et Wang in herb. sp. nov. TYPE: Guangdong(广东), Ruyuan(乳源), at the margins of forests, 1933-05-13, X. P. Gao(高锡朋)52564(holotype, PE).

Haec species *C. hastatae* Kükenth. affinis, sed culmis 7～13 cm altis, foliis 10～15 mm latis differt.

Herba perennis. Rhizoma breve, lignosum. Culmus lateralis, 7～13 cm altus, compresso-triqueter, laevis, flexus, basi vaginis 3～4 aphyllis viridibus obtectus. Folia culmo multo longiora 10～15 mm lata, plana, marginibus scabra, acuminata. Bracteae vaginantae, breviter laminiferae, spiculae 3～4, approximatae, pedunculatae, terminalis staminata, claviformis, 6～8 mm longa; laterales pistillatae 2～3, ovatae, 10 mm longae, 7 mm latae, sublaxi-(5～7) florae. Squamae pistillatae ovato-lanceolatae, flavo-pallidae, dorso viriditrinerves, nervis in aristam excurrentes. Utriculi squamas superantes, oblique patentes, rhomboidales, obtuse trigoni, 7～8 mm longi, papyracei, flavo-virides, glabri, multinerves, basi attenuati, apice in rostrum 2.5 mm longum, bidentatum sensim abeuntes. Nux arcte inclusa rhomboidali-ellipsoidea, trigona, ca. 5 mm longa, atro-purpurea, medio constricta, curvatim stipitata, apice in rostrum 1 mm longum abrupte contracta. Stylus basi subincrassatus. Stigmata 3.

多年生草本。根状茎短，木质。秆侧生，高7～13 cm，扁三棱形，平滑，弯曲，基部具3～4枚无叶片的绿色叶鞘。叶极长于秆，宽10～15 mm，平张，边缘粗糙，先端渐尖。苞片短叶状，具鞘。小穗3～4个，彼此靠近，具小穗柄，顶生一个雄性，棍棒状，长6～8 mm；侧生雌小穗2～3个，卵形，长10 mm，宽7 mm，花稀疏(5～7朵)。雌花鳞片卵状披针形，黄白色，背面3脉绿色延伸成芒尖。果囊长于鳞片，斜展，菱形，钝三棱形，长7～8 mm，纸质，黄绿色，无毛，具多脉，基部渐狭，上部渐缩成长喙，喙长2.5 mm，口具2齿。小坚果紧

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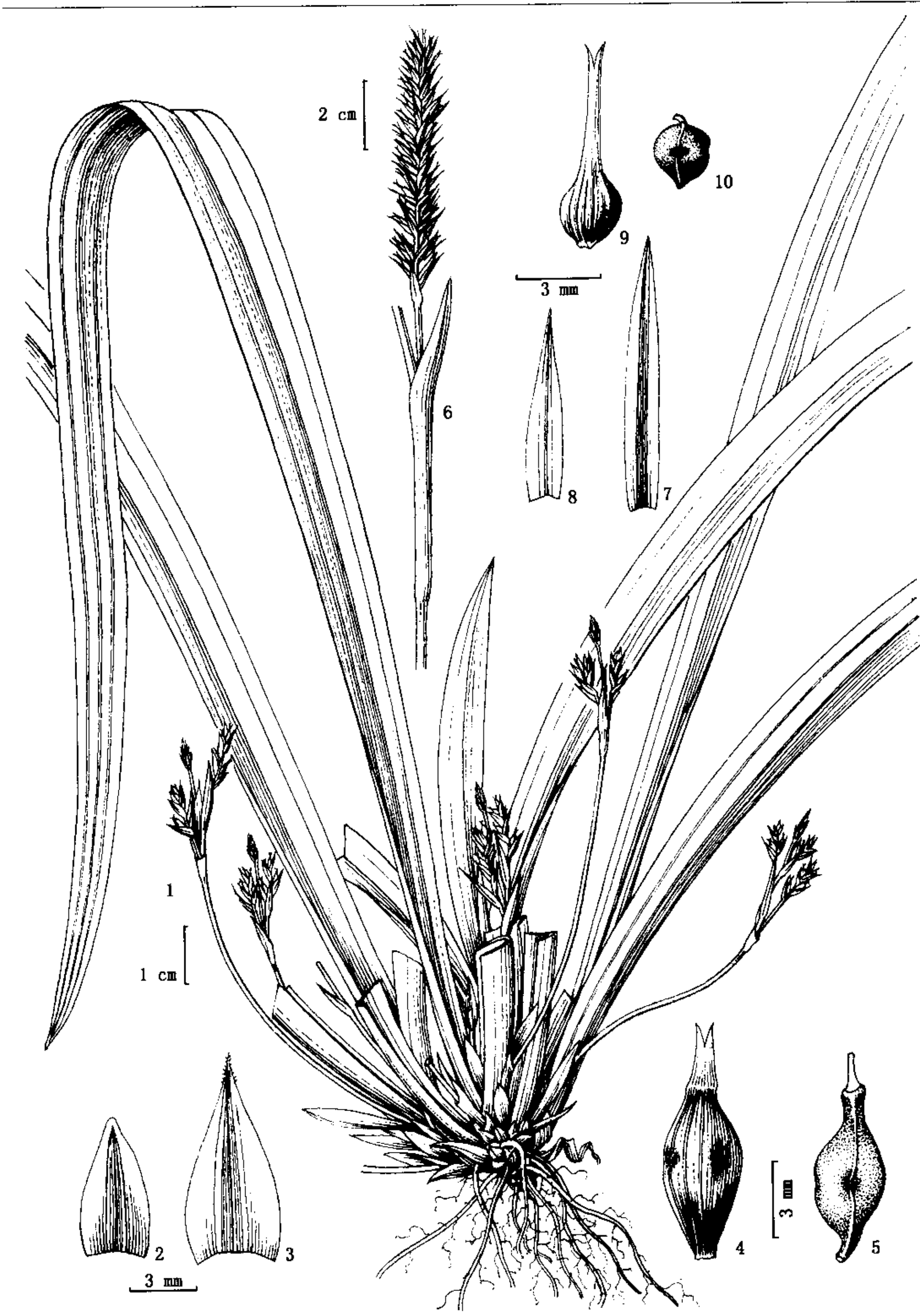



图1　高氏苔草　1. 植株；2. 雄花鳞片；3. 雌花鳞片；4. 果囊；5. 小坚果。6～10. 南川苔草　6. 雌小穗；7. 雄花鳞片；8. 雌花鳞片；9. 果囊；10. 小坚果。(王金凤 绘，冀朝祯 抄)

Fig. 1　1～5. *Carex kaoi*　1. Plant; 2. Staminate scale; 3. Pistillate scale; 4. Utricle; 5. Nut. 6～10. *C. nanchuanensis*　6. Pistillate spike; 7. Staminate scale; 8. Pistillate scale; 9. Utricle; 10. Nut.

包于果囊中,菱状椭圆形,三棱形,长约5 mm,黑紫色,中部棱边缢缩,基部具弯柄,先端急缩成长喙,喙长约1 mm;花柱基部稍变粗,柱头3。

本种与戟叶苔草 *C. hastata* Kükenth.相近,不同在于秆较矮,高7~13 cm。叶宽10~15 mm。

**2 南川苔草 新种 图1:6~10**

**Carex nanchuanensis** Chü in herb. sp. nov. TYPE: Sichuan(四川), Nanchuan(南川), in grassy, rocky places, alt. 2050 m, 1935-06-12, K. L. Chü 1298(holotype, PE).

Proxima *C. thibeticae* Franch., a qua spiculis pistillatis interdum apice floribus staminatis paucis instructis, utriculis subglobosis, nervis prominentibus differt.

Herba perennis. Rhizoma breve, lignosum, firmum. Culmus lateralis, 20~35 cm altus, compresso-triqueter, laevis, basi vaginis atro-brunneis in fibras solutis obtectus. Folia culmo longiora 1.2~1.8 mm lata, plana, viridia, supra marginibus scabra. Bracteae longe vaginantae, breviter laminiferae, marginibus scabrae. Spiculae 4~5, terminalis staminata, claviformi-cylindrica, 2.2~3 cm longa, laterales pistillatae 3~4, interdum apice floribus staminatis paucis instructis, cylindricae, 4~5.5 cm longae, 1.5 cm latae, densiflorae, pedunculatae erectae. Squamae pistillatae lanceolatae, rigidae ca. 6 mm longae, flavo-pallidae, dorso viridi-trinerves nervis apice in mucronem excurrentes. Utriculi squamis longiores, oblique patentes, subglobosi (rostro excepto) 6~7 mm longi(rostro incluso), membranacei, flavo-virides, parce pubescentes, nervibus prominentes, basi roundi, apice in rostrum longum cylindricum ore bidentatum abrupte abeuntes. Nux arcte inclusa subglobosa, trigona, 2 mm longa, medio constricta, inferne lateribus excavata, atro-purpurea, apice in rostrum breve curvum abrupte contracta. Stylus basi haud mcrassatus. Stigmata 3.

多年生草本。根状茎短,木质,坚硬。秆侧生,高20~35 cm,扁三棱形,平滑,基部叶鞘暗棕色分裂成纤维状。叶长于秆,宽1.2~1.8 mm,平张,绿色,上部边缘粗糙。苞片短叶状,边缘粗糙,具长鞘。小穗4~5个,顶生1个雄性,棍棒状圆柱形,长2.2~3 cm;侧生3~4个雌性,有时顶端有少数雄花,圆柱形,长4~5.5 cm, 宽1.5 cm,花密生,小穗柄直立。雌花鳞片披针形,坚挺,长约6 mm,黄白色,背面3脉深绿色,向顶延伸成短尖。果囊长于鳞片,斜展,近球形(喙除外),长6~7 mm(连喙),膜质,黄绿色,稍被毛,脉极隆起,基部圆形,上部急缩成长喙,喙圆筒形,口具2齿。小坚果紧包于果囊中,近球形,三棱形,长2 mm,棱边中部缢缩,下部侧面凹陷,暗紫色,顶端喙短,弯曲;花柱基部不膨大,柱头3。

本种与藏苔草 *C. thibetica* Franch.相近,但雌小穗顶端有时具少数雄花。果囊近球形。脉极隆起而不同。

**3 陈氏苔草 新种 图2:1~5**

**Carex cheniana** Tang et Wang in herb. sp. nov. TYPE: Zhejiang(浙江), Longquan(龙泉), mountain slope, under forests, 1934-05-18, S. Chen(陈氏)3173(holotype, PE).

Affinis *C. saxicolae* Tang et Wang, a qua utriculis squamis brevioribus, nucis rostro curvo differt.

Herba perennis. Rhizoma breve. Culmus 40~60 cm altus, triqueter, laevis. Folia culmo longiora vel breviora, 5~9 mm lata, plana, marginibus revoluta, superne scabra, apice sensim attenuata. Bracteae foliaceae longe vaginantae. Spiculae 4~5, remotae, terminalis staminata, claviformis, 1~2.8 cm longa; laterales pistillatae 3~4, apice floribus staminatis paucis instructis, cylindricae, 3.5~6 cm longae, 5~8 mm latae, densiflorae. Squamae pis-

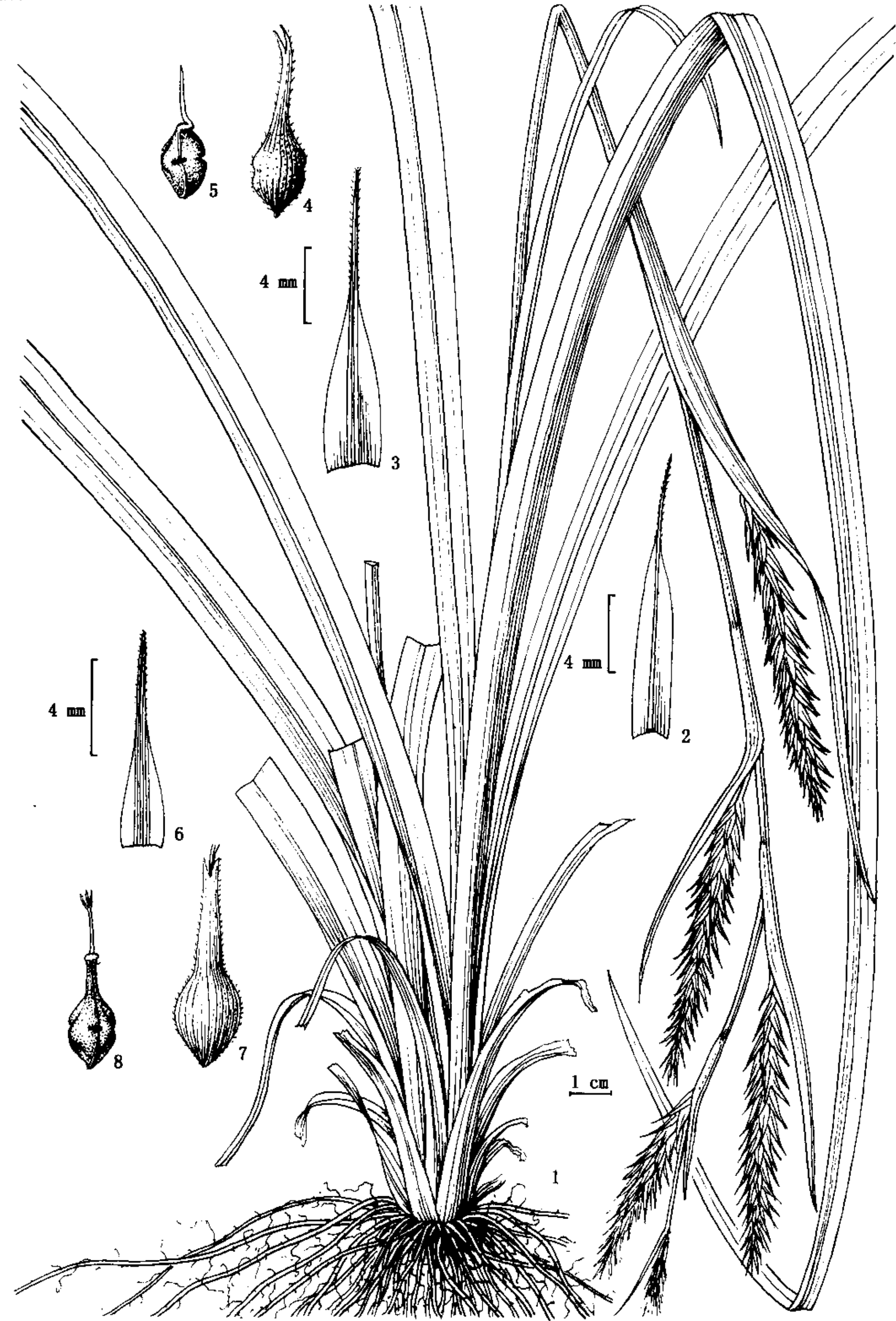



图 2　陈氏苔草　1. 植株；2. 雄花鳞片；3. 雌花鳞片；4. 果囊；5. 小坚果。6～8. 富宁苔草　6. 雌花鳞片；7. 果囊；8. 小坚果。(王金凤 绘，冀朝祯 抄)

Fig. 1　1～5. *Carex cheniana*　1. Plant; 2. Staminate scale; 3. Pistillate scale; 4. Utricle; 5. Nut. 6～8. *C. funingensis*　6. Pistillate scale; 7. Utricle; 8. Nut.

tillatae ovato-lanceolatae, 7.5～10 mm longae, nitidae, glabrae, pallidae, dorso viridi-trinerves nervis apice in aristam longam scabram excurrentes. Utriculi squamis breviores, oblique patentes, rhomboidali-ellipsoidei(rostro excepto), trigoni, 7～7.5 mm longi(rostro incluso), coriacei, fulvi, parce pubescentes, multinerves, basi attenuati, apice in rostrum 4 mm longum ore profunde bidentatum abrupte abeuntes. Nux arcte inclusa rhomboidali-ellipsoidea, trigona, 3 mm longa, medio constricta, inferne lateribus concavis, curvatim stipitata, apice in rostrum breve curvum abrupt contracta. Stylus basi subincrassatus. Stigmata 3.

多年生草本。根状茎短,秆高 40～60 cm,三棱形,平滑。叶长于或短于秆,宽 5～9 mm,平张,边缘反卷,上部边缘粗糙,先端渐狭。苞片叶状,具长鞘。小穗 4～5 个,顶生 1 个雄性,棍棒状圆柱形,长 1～2.8 cm;侧生 3～4 个雌性,顶端有雄花,圆柱形,长 3.5～6 cm,宽 5～8 mm,花密生。雌花鳞片卵状披针形,长 7.5～10 mm,光亮,无毛,苍白色,背面3脉绿色延伸成长芒。果囊短于鳞片,斜展,菱状椭圆形(喙除外),三棱形,长7～7.5 mm(连喙),草质,黄褐色,被疏柔毛,具多脉,基部渐狭,上部急缩成长喙,喙长 4 mm,口具 2 齿。小坚果紧包于果囊中,菱状椭圆形,三棱状,长 3 mm,中部棱上缢缩,下部侧面凹陷,具弯曲的柄,顶端急缩成短喙,喙弯曲;花柱基部稍膨大,柱头 3。

本种与岩生苔草 *C. saxicola* Tang et Wang 相近,但果囊短于鳞片。小坚果喙弯而不同。

**4 富宁苔草** 新种 图2:6～8

**Carex funingensis** Tang et Wang in herb. sp. nov. TYPE: Yunnan(云南), Funing(富宁), under dense woods, alt. 1100 m, 1940-04-12, C. W. Wang(王启无)88389(holotype, PE).

Species *C. harlandii* Boott affinis, sed spicula pistillata 1, squamis pistillatis ovatis, utriculis parce pubescentibus differt.

Herba perennis. Rhizoma breve, lignosum. Culmus lateralis, 40 cm altus, compresso-triqueter, laevis, basi vaginis atro-brunneis in fibras solutis obtectus. Folia culmo longiora, 7～9 mm lata, plana, supra vel marginibus scabra, apice attenuata. Bracteae foliaceae haud vaginantae. Spicula pistillatae 1, cylindrica, 5.5 cm longa, ca. 1 cm lata, pedunculata. Squamae pistillatae lanceolatae, 6～8 mm longae, flavo-pallidae, dorso viridi-trinerves nervis apice in aristam longam scabram excurrentes. Utriculi squamas superantes, oblique patents, ovati(rostro excepto), 7～7.5 cm longi(rostro incluso), papyracei, virides, parce pubescentes, prominentes multinerves apice in rostrum longum ore profunde bidentatum abrupte abeuntes. Nux arcte inclusa, ovata, trigona, 4 mm longa, fulva, medio constricta, inferne lateribus excavata, breve curvatim stipidata, apice in rostrum 1.5 mm longum, cylindricum, apice annulatum abrupte desinens. Stylus basi haud incrassatus. Stigmata 3.

多年生草本。根状茎短,木质。秆侧生,高达 40 cm,扁三棱形,平滑,基部具暗褐色细裂成纤维状的叶鞘。叶长于秆,宽 7～9 mm,平张,表面粗糙,上部边缘具细齿,先端渐狭。苞片叶状,无鞘。小穗 1 个,雌性,顶端无雄花,圆柱状,长 5.5 cm,宽约 1 cm,具小穗柄。雌花鳞片披针形,长 6～8 mm,黄白色,背面 3 脉绿色,向顶渐狭成粗糙长芒。果囊长于鳞片,斜展,卵形(喙除外),长 7～7.5 mm(连喙),纸质,绿色,被稀疏柔毛,具多条隆起的脉,先端急缩成长喙,口具 2 长齿。小坚果紧包于果囊中,卵形,三棱状,长约 4 mm,黄褐色,中部棱边缢缩,下部侧面凹陷,基部柄弯曲,上部急缩成喙,圆柱形,喙长1.5mm,

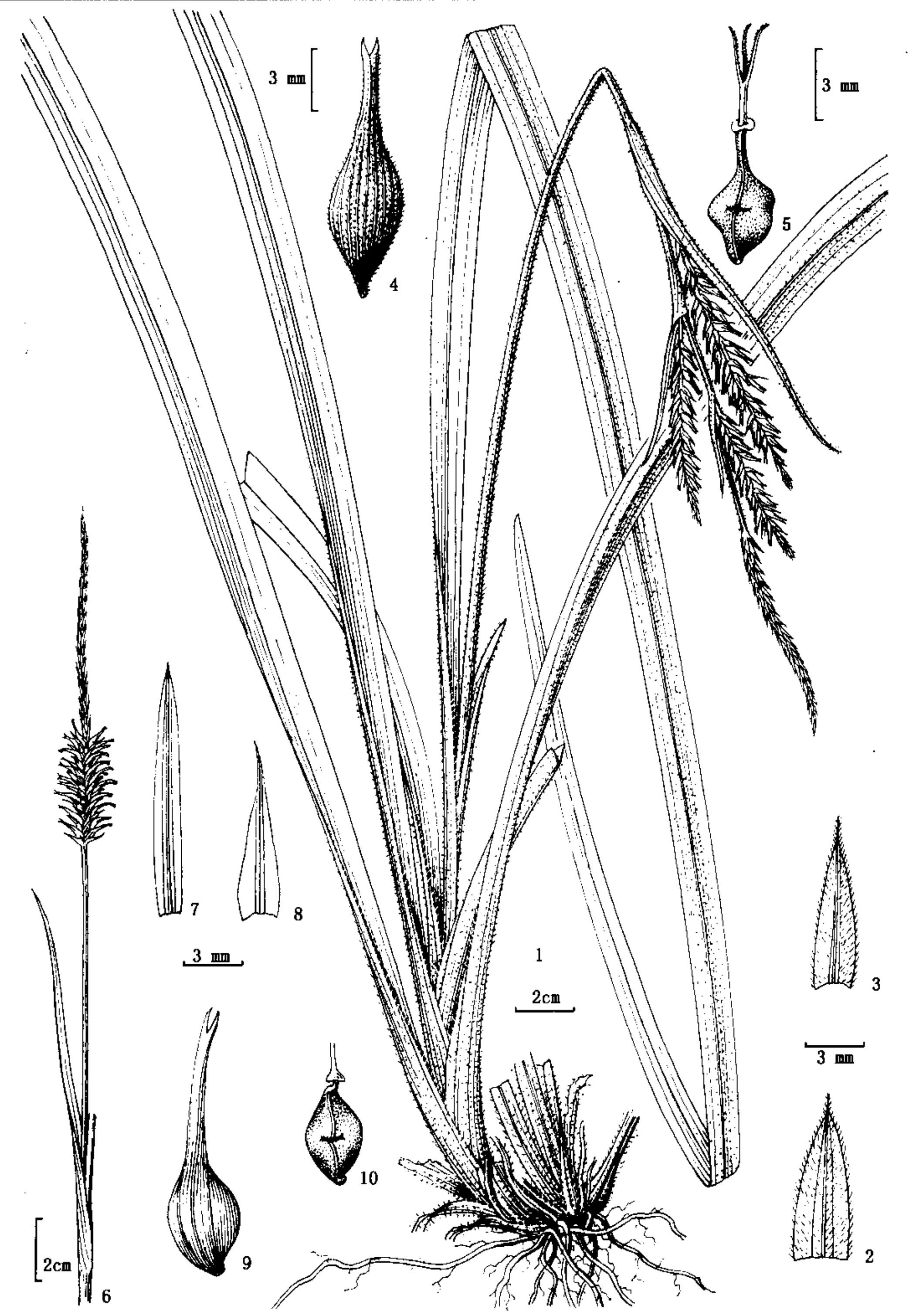



图3　弥勒山苔草　1. 植株；2. 雄花鳞片；3. 雌花鳞片；4. 果囊；5. 小坚果。6～10. 古城苔草　6. 侧生小穗；7. 雄花鳞片；8. 雌花鳞片；9. 果囊；10. 小坚果。(王金凤 绘，冀朝祯 抄)

Fig.3　1～5. *Carex pseudo-laticeps*　1. Plant; 2. Staminate scale; 3. Pistillate scale; 4. Utricle; 5. Nut. 6～10. *C. kuchunensis*　6. Laterale spike; 7. Staminate scale; 8. Pistillate scale; 9. Utricle; 10. Nut.

顶端膨大;花柱基部不膨大,柱头3。

本种与长囊苔草 *C. harlandii* Boott 相近,但小穗1个,雌性,雌花鳞片卵形,果囊被稀疏柔毛易于区别。

**5　弥勒山苔草　新种　图3:1～5**

**Carex pseudo-laticeps** Tang et Wang in herb. sp. nov. TYPE: Hongkong(香港), Mileshan(弥勒山) on rocks, C. L. Tso(左景烈)20216(holotype, PE).

Haec species *C. laticipi* C. B. Clarke ex Franch. affinis, sed foliis 6～10 mm latis, spiculis pistillatis 3, nucis rostro erecto differt.

Herba perennis. Rhizoma breve, lignosum. Culmus 33 cm altus, triqueter, pilosus, basi vaginis atro-brunneis in fibras solutis obtectus. Folia culmo longiora, 6～10 mm lata, plana, pubescentia, apice attenuata. Bracteae vaginantae, breviter laminiferae, pilosae. Spiculae 4, approximatae, terminalia staminata, lineari-cylindrica, 3.5 cm longa, longe pedunculata, pilosa; laterales pistillatae 3, apice floribus staminatis instructae, cylindricae, 2.5～4.2 cm longae, densiflorae, pedunculatae, pilosae. Squamae pistillatae lanceolatae, ca. 5 mm longae, flavo-pallidae, pilosae, dorso viridi-trinerves nervis apice in mucronem excurrentes. Utriculi squamas superantes, oblique patentes, ovoideo-ellipsoidei, trigoni, 8 mm longi, subcoriacei, fulvi, pilosi, multinerves, basi attenuati, apice in rostrum longum ore profunde bidentatum abrupte abeuntes. Nux arcte inclusa, subrhomboidali-obvoidea, 3～4 mm longa, atro-purpurea, medio constricta, inferne lateribus excavata, oblique stipitata, apice in rostrum 1.5 mm longum erectum abrupte abeuntes. Stylus basi subincrassatus. Stigmata 3.

多年生草本。根状茎短,木质。秆高33 cm,三棱形,被柔毛,基部具暗褐色分裂成纤维状的叶鞘。叶长于秆,宽6～10 mm,平张,叶两面被柔毛,顶端渐狭。苞片短叶状,被柔毛,具鞘。小穗4个,彼此靠近,顶生1个雄性,线状圆柱形,长3.5 cm;小穗柄较长,被柔毛;侧生3个雌性,顶端有雄花,圆柱形,长2.5～4.2 cm,花密生,小穗柄被柔毛。雌花鳞片披针形,长约5 mm,黄白色,被柔毛,背面3脉绿色延伸成短尖。果囊长于鳞片,斜展,卵状椭圆形,三棱形,长8 mm,近革质,黄褐色,密被柔毛,具多脉,基部渐狭,上部急缩成长喙,喙口具2齿。小坚果紧包于果囊中,近菱状倒卵形,长3～4 mm,黑紫色,中部棱边缢缩,下部侧面凹陷,基部柄歪,先端急缩成直立的长喙,喙长1.5 mm,花柱基部膨大,柱头3。

本种与弯喙苔草 *C. laticeps* C. B. Clarke ex Franch.相近,不同在于叶宽6～10 mm,雌小穗3个,小坚果喙直而异。

**6　古城苔草　新种　图3:6～10**

**Carex kuchunensis** Tang et Wang in herb, sp. nov. TYPE: Guangxi(广西), on rocks by stream or under woods, alt. 900 m, s. coll. 21234(holotype, PE), s. coll. 20196(PE).

Affinis *C. brevicuspidi* C. B. Clarke, a qua parte superiore staminata 2/3 spiculae pistillatae lateralis saepe attingente, squamis pistillatae ovato-lanceolatis, stylo basi incrassato differt.

Herba perennis. Rhizoma breve, lignosum. Culmus 50～75 cm altus, compresso-triqueter, laevis, ad basin vaginis atro-brunneis vestitus. Folia culmo longiora, 6～8 mm lata, plana, marginibus scabra, coriacea. Bracteae vaginantae, breviter laminiferae. Spiculae 4～5, remotae, terminalis staminata lineari-cylindrica, 5～7.5 cm longa, longe pedunculata;

laterales 3～4 pistillatae (parte superiore staminata 2/3 spiculae saepe attingenti), cylindricae, 5～7.5 cm longae, pedunculo 1.5～8.5 cm longo. Squamae pistillatae ovato-lanceolatae, apice attenuatae, 5～6 mm longae, fulvo-virides, dorso viridi-trinerves. Utriculi squamas superantes, ovati(rosto excepto), 6～7 mm longi(rostrum incluso), fulvi, coriacei, glabri, multinerves, basi contracri, apice in rostrum 4 mm longum ore profunde bidentatum abrupte abeuntes. Nux arcte inclusa, ovata, trigona, 2.5 mm longa, atro-purpurea, curvatim stipitata, medio constricta, inferne lateribus excavata, apice in rostrum curvum abrupte contracta. Stylus basi incrassatus. Stigmata 3.

多年生草本。根状茎短,木质。秆高 50～75 cm,扁三棱形,平滑,基部叶鞘深褐色。叶长于秆,宽 6～8 mm,平张,边缘粗糙,革质。苞片短叶状,具长鞘。小穗 4～5 个,远离,顶端 1 个雄性,线状圆柱形,长 7～7.5 cm,小穗柄长;侧生小穗雌性(上部雄花部分常达 2/3)3～4 个,圆柱形,长 5～7.5 cm;小穗柄长 1.5～8.5 cm。雌花鳞片卵状披针形,先端渐狭,长 5～6 mm,黄绿色,背面 3 脉绿色。果囊长于鳞片,卵形(喙除外),长 6～7 mm(连喙),黄褐色,革质,无毛,具多脉,基部收缩,上部急缩成长喙,喙长 4 mm,口深裂为 2 长齿。小坚果紧包于果囊中,卵形,三棱状,长 2.5 mm,黑紫色,具弯柄,中部棱边缢缩,下部侧面凹陷,先端急缩成喙,喙弯曲,花柱基部膨大,柱头 3。

本种与短尖苔草 *C. brevicuspis* C. B. Clarke 相近,但侧生小穗上部的雄花部分通常长达小穗的 2/3,雌花鳞片卵状披针形,花柱基部膨大易于区别。

**7　城湾苔草　新变种**

**Carex longerostrata** C. A. Mey. var. **hoi** Chü in herb. var. nov. TYPE: Zhejiang(浙江), 1932-04-19, Y. Y. He(贺贤育)943(holotype PE).

Haec varietas a var longerostratae differ utriculis glabris, nucis rostro erecto.

与原变种的区别在于果囊无毛。小坚果的喙直。

**8　密花相仿苔草　新变种**

**Carex simulans** C. B. Clarke var. **densiflora** Tang et Wang, in herb. var. nov. TYPE: Sichuan(四川), Xichang(西昌), under woods, alt. 2050 m, 1932-06-25, T. T. YU 1119(holotype, PE).

A var. *simulanti* differt spiculis pistiallatis densifloris, squamis pistillatis marginibus pallidis, aristis longis, nucis rostro longo.

本种与原变种的区别在于雌小穗花密生,雌花鳞片边缘白色,具长芒,小坚果喙长。

**9　九华苔草　亚种　新组合**

**Carex manca** Boott subsp. **jiuhuaensis** (S. W. Su)S. Y. Liang, comb nov.

*C. jiuhuaensis* S. W. Su in Bull. Bot. Res. 10(4):5. Fig. 1. 1990. TYPE: Anhui(安徽), Jiuhuashan(九华山), Tiantai(天台), 1980-05-13, S. W. Su 80038(holotype, ANU).

**10　澳门苔草　亚种　新组合**

**Carex manca** Boott subsp. **wichurai** (Boeck.)S. Y. Liang, comb. nov.

*C. wichurai* Boeck. in Bot. Jahrb. 5: 519. 1884. TYPE: Macao(澳门), Wichura no. 1704(Herb. Mus. Bot. Berolin)

*C. manca* Boott var. *wichurai* Kükenth. in Engl. Pflanzenr. Heft 38 Ⅳ. 20. 629. 1909.